

**CENSUS OF FATAL OCCUPATIONAL  
INJURIES  
MICHIGAN 2005**

MIOSHA - Michigan Occupational Safety and  
Health Administration  
Management Information Systems Section  
Management & Technical Services Division  
Michigan Dept. of Labor & Economic Growth  
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## **BACKGROUND - CENSUS OF FATAL OCCUPATIONAL INJURY PROGRAM**

The Census of Fatal Occupational Injuries program, part of the BLS safety and health statistics program, provides the most complete count of fatal work injuries available. The program uses diverse state and federal data sources to identify, verify and profile fatal work injuries. Information about each workplace fatality (occupation and other worker characteristics, equipment being used, and circumstances of the event) is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, and reports to federal and state agencies. This method assures counts are as complete and accurate as possible.

The Michigan portion of the Census of Fatal Occupational Injuries is conducted by the Michigan Department of Labor & Economic Growth, MIOSHA, Management Information Systems Section in cooperation with the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor.

## **2005 CENSUS PROFILES**

### **Major findings of the Michigan Census are:**

- Transportation accidents led all other events and accounted for 40 fatalities (36 percent) of the 110 fatal occupational injuries in 2005. This was followed by Contact with Objects and Equipment with 20 fatalities (18 percent) and Falls with 19 fatalities (17 percent) (Table 1).
- Sixty-five percent of the fatally injured Michigan workers were 25 - 54 years of age. (Table 2)
- Based on gender, 94 percent of Michigan's fatally injured workers were men and 6 percent were women. (Table 2)
- Occupations with the largest number of worker fatalities are Transportation and Material Moving occupations (24) followed by Construction and Extraction (19) . (Table 3)
- Industry groups with the largest number of Michigan fatal work injuries in 2005 were Construction (20), Agriculture, Forestry, Fishing & Hunting (17) , and Transportation & Warehousing (14). (Table 4)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries  
by Event or Exposure, Michigan 2005**

1/ Event or Exposure	<u>Fatalities</u>	
	Number	Percent
<b>Total</b>	<b>110</b>	<b>100</b>
<b>Transportation accidents</b>	<b>40</b>	<b>36</b>
Highway accident	20	18
Collision between vehicles, mobile equipment	10	9
Moving in opposite directions, oncoming	3	3
Moving in intersection	3	3
Vehicle struck stationary object, equipment on side of road	7	6
Noncollision accident	3	3
Jack-knifed or overturned—no collision	3	3
Nonhighway accident, except rail, air, water	9	8
Noncollision accident	9	8
Fell from and struck by vehicle, mobile equipment	4	4
Overturned	5	5
Pedestrian, nonpassenger struck by vehicle, mobile equipment	3	3
Aircraft accident	6	5
<b>Assaults and violent acts</b>	<b>16</b>	<b>15</b>
Assaults and violent acts by person(s)	14	13
Shooting	11	10
<b>Contact with objects and equipment</b>	<b>20</b>	<b>18</b>
Struck by object	13	12
Struck by falling object	7	6
Struck by flying object	3	3
Caught in or compressed by equipment or objects	4	4
Caught in running equipment or machinery	3	3
Caught in or crushed in collapsing materials	3	3
Excavation or trenching cave-in	3	3
<b>Falls</b>	<b>19</b>	<b>17</b>
Fall to lower level	17	15
Fall from ladder	3	3
Fall from roof	6	5
Fall from roof edge	4	4

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries  
by Event or Exposure, Michigan 2005  
(Continued)**

<b>1/ Event or Exposure</b>	<b><u>Fatalities</u></b>	
	<b>Number</b>	<b>Percent</b>
<b>Exposure to harmful substances or environments</b>	<b>10</b>	<b>9</b>
Contact with electric current	4	4
Exposure to caustic, noxious, or allergenic substances	5	5
Ingestion of substance	3	3
<b>Fires and explosions</b>	<b>5</b>	<b>5</b>

1/ Based on 1992 BLS Occupational Injury/Illness Classification Manual.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2005 are preliminary.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 2. Number and Percent Distribution of Fatal Occupational  
Injuries by Selected Characteristics, Michigan 2005**

Worker Characteristics	<u>Fatalities</u>	
	Number	Percent
<b>Total</b>	<b>110</b>	<b>100</b>
<b>Employee Status</b>		
Wage and salary workers 1/	88	80
Self-employed 2/	22	20
<b>Sex</b>		
Men	103	94
Women	7	6
<b>Age</b>		
Both sexes:		
Under 16 years	--	--
16 to 17 years	--	--
18 to 19 years	3	3
20 to 24 years	7	6
25 to 34 years	18	16
35 to 44 years	27	25
45 to 54 years	27	25
55 to 64 years	16	15
65 years and over	11	10
<b>Race 3/</b>		
White, non-Hispanic	89	81
Black, non-Hispanic	12	11
Hispanic or Latino	8	7
American Indian or Alaska Native	--	--
Asian	--	--
Native Hawaiian or Pacific Islander	--	--

1/ May include volunteers and workers receiving other types of compensation.

2/ Includes self-employed workers, owners of unincorporated businesses and farms, paid and unpaid family workers, and may include some owners of incorporated businesses or members of partnerships.

3/ Persons identified as Hispanic or Latino may be of any race. The race categories shown exclude data for Hispanics and Latinos.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2005 are preliminary.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2005**

<b>1/ Occupation</b>	<b>Number</b>	<b><u>Fatalities</u> Percent</b>
<b>Total</b>	<b>110</b>	<b>100</b>
<b>Management occupations</b>	<b>13</b>	<b>12</b>
Other management occupations	9	8
Agricultural managers	8	7
<b>Sales and related occupations</b>	<b>6</b>	<b>5</b>
Supervisors, sales workers	3	3
First-line supervisors/managers, sales workers	3	3
<b>Protective service occupations</b>	<b>8</b>	<b>7</b>
Law enforcement workers	5	5
<b>Farming, fishing and forestry occupations</b>	<b>7</b>	<b>6</b>
Agricultural workers	6	5
<b>Building and grounds cleaning and maintenance occupations</b>	<b>5</b>	<b>5</b>
<b>Construction and extraction occupations</b>	<b>19</b>	<b>17</b>
Construction trades workers	12	11
Construction laborers	5	5
Roofers	5	5
<b>Installation, maintenance, and repair occupations</b>	<b>9</b>	<b>8</b>
<b>Production occupations</b>	<b>8</b>	<b>7</b>
<b>Office and administrative support occupations</b>	<b>3</b>	<b>3</b>

**Table 3. Number and Percent Distribution of Fatal Occupational  
Injuries by Occupation, Michigan 2005  
(Continued)**

<b>1/ Occupation</b>	<b>Number</b>	<b><u>Fatalities</u> Percent</b>
<b>Transportation and material moving occupations</b>	<b>24</b>	<b>22</b>
Motor vehicle operators	16	15
Driver/sales workers and truck drivers	12	11
Truck drivers, heavy and tractor-trailer	8	7
Truck drivers, light or delivery services	3	3
Material moving workers	4	4
Industrial truck and tractor operators	3	3
<b>Events categories that did not meet Publication Criteria</b>	<b>8</b>	<b>7</b>

1/ Based on the 2000 Standard Occupational Classification System.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2005 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal Agencies, Census of Fatal Occupational Injuries.

**Table 4. Number and Percent Distribution of Fatal Occupational  
Injuries by Industry, Michigan 2005**

<b>1/ Industry</b>	<b>Number</b>	<b><u>Fatalities</u> Percent</b>
<b>Total</b>	<b>110</b>	<b>100</b>
<b>Private Industry</b>	<b>100</b>	<b>91</b>
<b>Agriculture, Forestry, Fishing &amp; Hunting</b>	<b>17</b>	<b>15</b>
Crop Production	14	13
Animal Production	3	3
<b>Construction</b>	<b>20</b>	<b>18</b>
Construction of Buildings	7	6
Residential Building Construction	5	5
Heavy and Civil Engineering Construction	3	3
Specialty Trade Contractors	10	9
Foundation, Structure, and Building Exterior Contractors	8	7
Roofing Contractors	4	4
<b>Manufacturing</b>	<b>13</b>	<b>12</b>
Transportation Equipment Manufacturing	4	4
<b>Retail Trade</b>	<b>8</b>	<b>7</b>
<b>Transportation &amp; Warehousing</b>	<b>14</b>	<b>13</b>
Truck Transportation	3	3
Support Activities for Road Transportation	3	3
<b>Information</b>	<b>3</b>	<b>3</b>
<b>Administrative and Support and Waste Management and Remediation Services</b>	<b>5</b>	<b>5</b>
Administrative and Support Services	3	3

**Table 4. Number and Percent Distribution of Fatal Occupational  
Injuries by Industry, Michigan 2005  
(Continued)**

<b>1/ Industry</b>	<b><u>Fatalities</u></b>	
	<b>Number</b>	<b>Percent</b>
<b>Arts, Entertainment, and Recreation</b>	<b>4</b>	<b>4</b>
<b>Other Services, Except Public Administration</b>	<b>4</b>	<b>4</b>
<b>Public Administration</b>	<b>6</b>	<b>5</b>

1/ Classified according to the North American Industry Classification System, 2002.

2/ Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2005 are preliminary.

SOURCE: U. S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 5. Number and Percent Distribution of Fatal Occupational Injuries  
by Source of Injury, Michigan 2005**

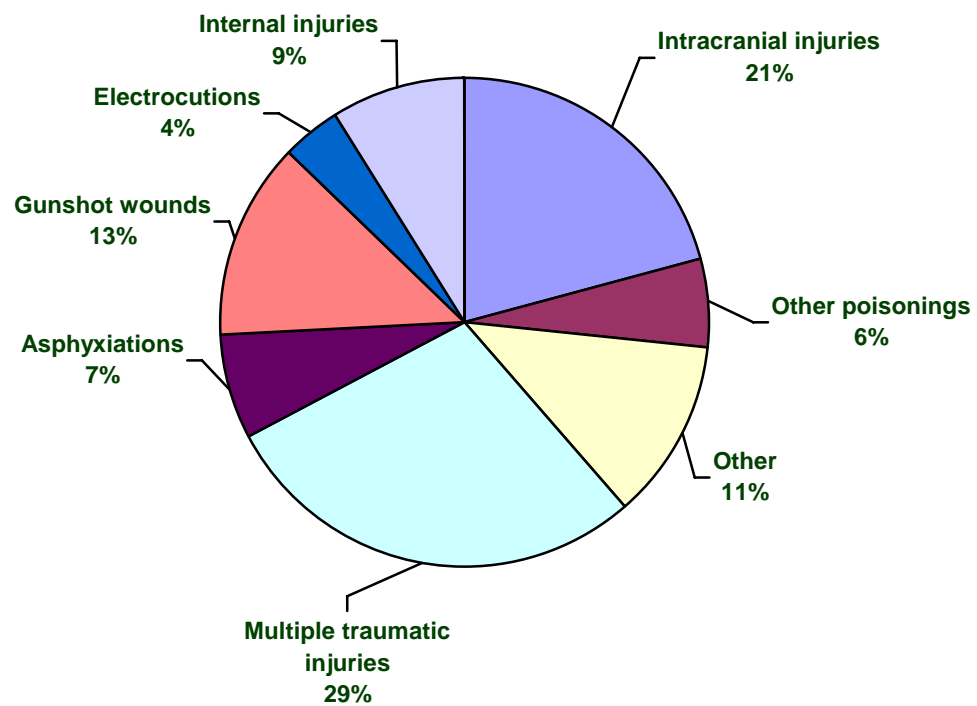
1/ Source of Injury	<u>Fatalities</u>	
	Number	Percent
<b>Total</b>	<b>110</b>	<b>100</b>
<b>Chemicals and chemical products</b>	<b>5</b>	<b>5</b>
<b>Containers</b>	<b>3</b>	<b>3</b>
<b>Machinery</b>	<b>7</b>	<b>6</b>
<b>Parts and materials</b>	<b>5</b>	<b>5</b>
Building materials—solid elements	3	3
<b>Persons, plants, animals and minerals</b>	<b>4</b>	<b>4</b>
<b>Structures and surfaces</b>	<b>22</b>	<b>20</b>
Floors, walkways, ground surfaces	20	18
Floors	8	7
Ground	8	7
<b>Vehicles</b>	<b>44</b>	<b>40</b>
Highway vehicle, motorized	27	25
Automobile	8	7
Truck	13	12
Van, passenger or light duty	3	3
Plant and industrial powered vehicles, tractors	10	9
Tractor	7	6
Forklift	3	3
Air Vehicle	6	5
<b>Other Sources</b>	<b>18</b>	<b>16</b>
Ammunition	14	13
Atmospheric and environmental conditions	4	4

1/ The primary source identifies the object, substance or exposure that directly produced or inflicted the injury. For most transportation incidents, the source identifies the vehicle in which the deceased was an occupant. For most falls, the primary source identifies the surface or object contacted.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2005 are preliminary.

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, in cooperation with the State and Federal Agencies, Census of Fatal Occupational Injuries

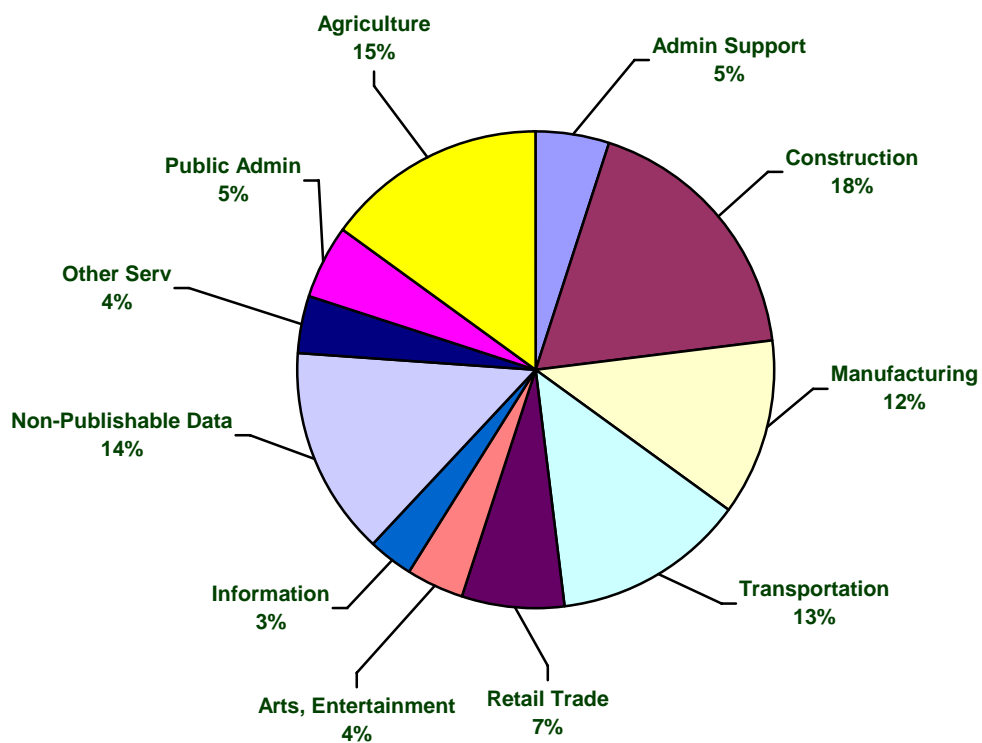
**Chart 1**  
**Fatal Occupational Injuries by Nature of Injury**  
**Michigan 2005**



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SOURCE: Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Chart 2**  
**Fatal Occupational Injuries by Industry Division**  
**Michigan 2005**



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SOURCE: Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

## **TECHNICAL NOTES**

### **Definitions**

For a fatality to be included in the census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in legal work activity or present at the site of the incident as a requirement of his or her job. These criteria are generally broader than the criteria used by federal and state agencies administering specific laws and regulations. Fatalities that occur during a person's commute to and from work are excluded from the census counts.

Data presented in this release include deaths occurring in 2005 that resulted from traumatic occupational injuries. Fatal injuries involve any intentional or unintentional wound or damage to the body resulting from an acute exposure to heat, electricity or kinetic energy from a crash or a fall. Fatal injuries can also involve the absence of essentials like heat or oxygen caused by a specific event, incident, or series of events within a single workday or shift.

Information on work-related fatal illnesses is not reported in the BLS census and is excluded from the attached tables due to the latency period of many occupational illnesses and the difficulty of linking illnesses to work make identification of a universe problematic.

### **Measurement Techniques and Limitations**

Data for the Census of Fatal Occupational Injuries are compiled from various state, federal and local administrative sources--including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, medical examiner reports and police reports--as well as news and other non-governmental reports. Diverse sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents, or from a source document and a follow-up questionnaire. Approximately 30 data elements are collected, coded, and tabulated, including information about the worker, the fatal incident, and the machinery or equipment involved.

## **Federal/State Agency Coverage**

The Census of Fatal Occupational Injuries includes data for all fatal work injuries, whether they are covered by the Michigan Occupational Safety and Health Administration (MIOSHA) or other federal or state agencies or are outside the scope of regulatory coverage. Thus, any comparison between the BLS fatality census counts and those released by other agencies should take into account the different coverage requirements and definitions being used.

Several federal and state agencies have jurisdiction over workplace safety and health. The Occupational Safety and Health Administration (OSHA) and affiliated agencies, in states such as Michigan, with OSHA-approved safety programs cover the largest portion of the nation's workers. However, injuries and illnesses occurring in certain industries or activities, such as coal, metal, and nonmetal mining and highway, water, rail, and air transportation, are excluded from MIOSHA coverage because they are covered by other federal agencies, such as the Mine Safety and Health Administration, and various agencies within the Department of Transportation. Fatalities occurring in activities regulated by federal agencies, other than MIOSHA, are included in the count of fatal work injuries for Michigan in 2005.

Fatalities occurring among several other groups of workers are generally not covered by any federal or state agencies. These groups include self-employed and unpaid family workers, which accounted for about 20 percent of the fatalities.

Acknowledgments: We appreciate the effort of all agencies that submitted source documents used to achieve the objectives of this program. To collect and publish data on fatal work injuries that is timely, accurate, comprehensive, and useful for injury prevention.

Among these agencies are the Occupational Safety and Health Administration; National Institute for Occupational Safety and Health; the Centers for Disease Control and Prevention; the Mine Safety and Health Administration; the U. S. Coast Guard; the Employment Standards Administration (Federal Employees' Compensation and Longshore and Harbor Workers' divisions); the National Transportation Safety Board; the Department of Energy; the National Association of Chiefs of Police; the Michigan vital statistics registrars, coroners, and medical examiners; the Michigan Bureau of Workers Disability Compensation; the Michigan Department of Community Health, State Registrar and Division of Health Statistics; the Michigan State Police Office of Highway and Safety Planning; Local Police Departments; and the state farm bureaus.